

A CATALOGUE OF THE ANIMALS OF
NORTH AMERICA

- * -

FORSTER

1771. *John Lindley Foster.*
Catalogue of the Animals
of North America.

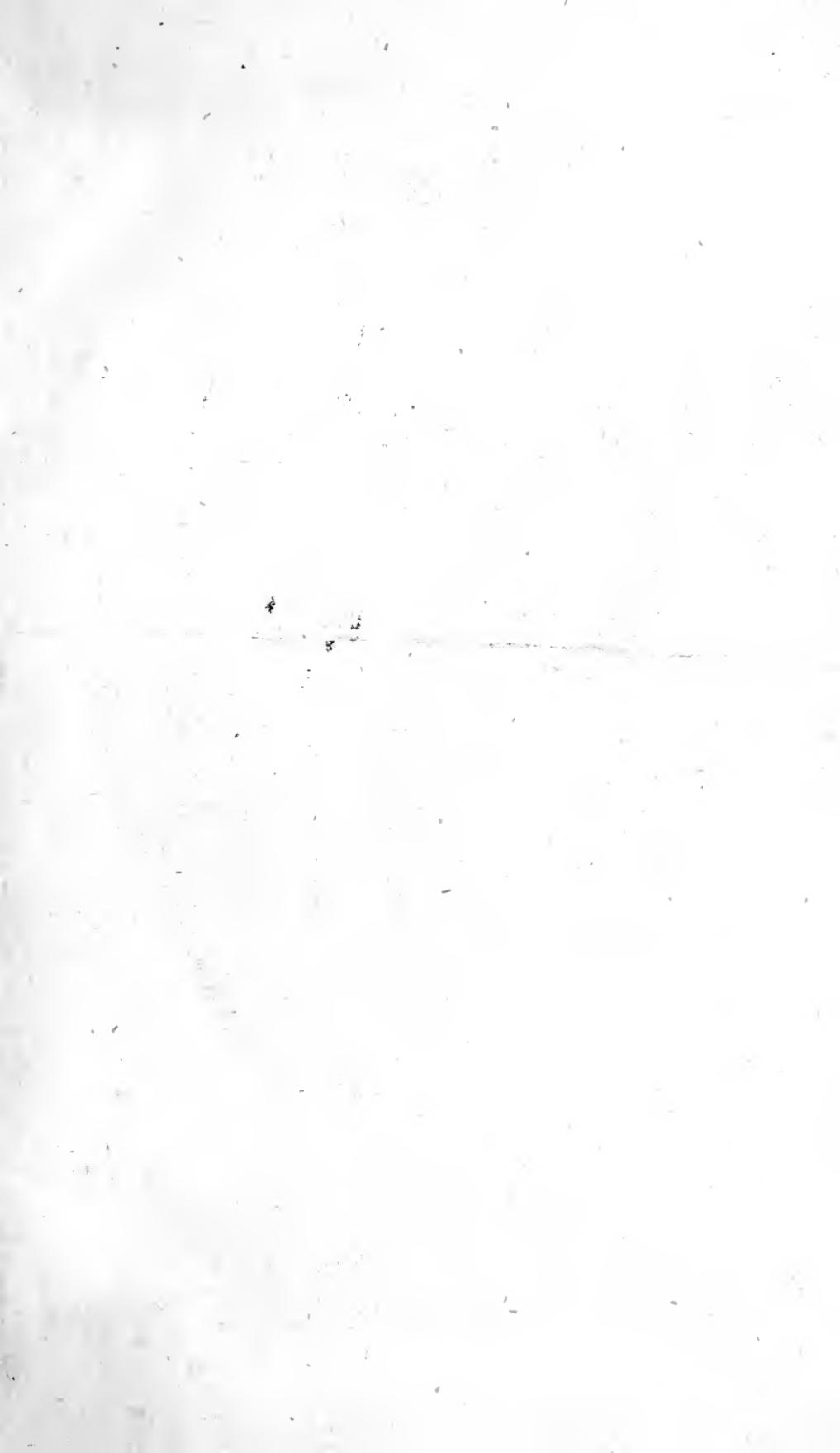
1771

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Little Falcon.
Falco Sparverius, LINN.



A
CATALOGUE
OF THE
ANIMALS
OF
NORTH AMERICA.

CONTAINING,
An Enumeration of the known QUADRUPEDS, BIRDS,
REPTILES, FISH, INSECTS, Crustaceous and
Testaceous ANIMALS; many of which are New, and
never described before.

To which are added,
SHORT DIRECTIONS
FOR
COLLECTING, PRESERVING, and TRANSPORTING,
all Kinds of
NATURAL HISTORY CURIOSITIES.

By JOHN REINHOLD FORSTER, F. A. S.

*Non ad unam Natura formam opus suum praefat; sed in ipsa
varietate se jactat.*

SENECA, Quæst. Nat. VII. 27.

LONDON:
Sold by B. WHITE, at Horace's Head, in Fleet-Street.

M.DCC.LXXI.



QL
151
P. 1. 3
1771
SONG

T O

MARMA DUKE TUNSTALL, Esq.

Dear SIR,

THE repeated favours *You* were so kind to bestow upon me, in the compass of a short acquaintance, and the zeal with which *You* promote the great cause of Natural History; encouraged me to prefix *Your* Name to this Publication, and give me an opportunity, thus publicly, to acknowledge the assistance *Your* benevolent and generous friendship favoured me with.

Nothing is left to me, but the simple mention of thanks; and my sincere wishes for *Your* health, happiness, and the enjoyment of every intellectual and moral blessing. I am, with the truest regard,

Dear SIR,

your most obliged,

obedient,

humble Servant,

London, April

24, 1771.

JOHN REINHOLD FORSTER

To the READER.

I Had hinted in the Preface to the third volume of *Kalm's Travels*, that I could publish but an imperfect and small catalogue of *North American* animals ; and therefore declined to give it. Since that time, I have been pressed by some worthy friends to publish that catalogue, such as it is ; and what is still more, I have been favoured with ample materials by a Gentleman, who is forming a collection for a Natural History of *North America*, and hopes by this to incite the inquisitive and learned resident in that country, to search, and to transmit to their friends in *England*, the productions of their several provinces. The Zoology of the first four classes of animals in *Great Britain*, has been very accurately and compleatly published ; that of the country of the descendants of *Great-Britain* ought with most propriety to follow, as it interests the Mother Country most. These reasons had a great weight with me ; and I offer this small catalogue merely as an essay towards forming a more compleat Natural History of that extensive continent. To instruct the Collectors, I have added to this list some short directions for the best method of preserving and transporting the various subjects of Natural History.

The Quadrupeds of this list are referred to the Synopsis of Quadrupeds of Mr. *Pennant* ; the Birds, Fish, Reptiles, Insects, and Crustacea, to *Linnæus*, *Briffon*, Mr. *Edwards*, and

To the R E A D E R.

and *Catesby*; some few excepted, which are referred to the *Planches enluminées*, published at *Paris*, and marked here *Pl. enl.* so as *Catesby* with a single *C.* and those which are common to *Great Britain* and *America*, to the *British Zoology*.

The Animals which have recently been discovered in *North America*, or overlooked by Mr. *Catesby*, are distinguished by *N. S.* marking a *New Species*; and by *B.* and *Mus. Bl.* The first authority is from a Collection formed by a Gentleman in his voyage to *Newfoundland*; the second, from a most select and numerous Collection of *American Animals*, belonging to a Lady in *Lancashire*.

The New Species, in the Catalogue of Birds, I had leave to insert here from Mr. *Pennant's* manuscript; and those of Insects are taken from my own manuscript descriptions of such Insects as were not described by Dr. *Linnæus*.

The print prefixed here represents an elegant little Falcon, drawn and engraved from a fine specimen lately brought over from *North America*.

N. B. The Animals marked *E* are of European Origin; having been introduced there by the Spaniards or English, after the discovery of the New World: and those marked *Eur.* are originally natives of both Continents.



CLASS I. QUADRUPEDS.

DIV. I. HOOFED.

SECT. I. WHOLE HOOFED.

Genus.			syn. quad.
I. HORSE	Generous	E.	Nº 1
	Afs	E.	3

SECT. II. CLOVEN HOOFED.

II. SHEEP	Common	E.	3
III. GOAT	Domestic	E.	p. 14
IV. DEER.	Elk, or Moose, <i>Eur.</i>		Nº 35
	Rein	<i>Eur.</i>	36
	Stag	<i>Eur.</i>	38
	Virginian	N. S.	39
	Roe?		43
V. Hog	Common	E.	54

DIV. II. DIGITATED QUADRUPEDS.

VI. DOG	Faithful	E.	Nº 110
	Wolf	<i>Eur.</i>	111
	Fox	<i>Eur.</i>	112
	Arctic	<i>Eur.</i>	113
	Grey		114
	Silvery		115
VII. CAT	Brown		129
	Common	E.	133
	Lynx	<i>Eur.</i>	135
	Bay Lynx	N. S.	136
			VIII.

VIII. BEAR	Black	Eur.	133
	Polar		139
	Wolverene	Eur.	140
	Raccoon		141
IX. BADGER	American	N. S.	143
X. OPOSSUM	Virginian		144
XI. WEESEL	Stoat	Eur.	Nº 151
	Pine Martin	Eur.	155
	Fisher	N. S.	157
	Pekan and Vison		166
	Striated		
	Skunk		167
XII. OTTER	Greater	Eur.	173
	Lesser	Eur.	174
	Sea		175
XIII. HARE	Common	Eur.	183
	Alpine	Eur.	184
	Rabbit	E.	186
XIV. BEAVER	Castor	Eur.	190
	Musk		191
XV. PORCUPINE	Canada		196
XVI. MARMOT	Maryland		198
	Quebec	N. S.	199
XVII. SQUIRREL	Common	Eur.	206
	α Hudson's Bay		
	Grey		209
	Black		210
	β Cat		
	Ground		216
	Flying	Eur.	
	β hooded		221
XVIII. RAT	Black	E.	226
	Brown?		227
	Water	Eur.	228
	Mouse	E.	229
			Field

	Field	<i>Eur.</i>	230
	Short-tailed	<i>Eur.</i>	233
XIX. MOLE	$\beta.$ yellow		p. 312
	Radiated		N ^o 243
	Long-tailed	N. S.	244
	Brown		245
XX. WALRUS	Arctic		N ^o 263
XXI. SEAL	Common	<i>Eur.</i>	265
	Great	<i>Eur.</i>	266
	Rough	N. S.	267
	Hooded	N. S.	268
	Harp	N. S.	269
	Little	N. S.	270
	Ursine		271
	Leōninae		272
XXII. MANATI	Manati		273
XXIII. BAT	New York	N. S.	283
	Long haired	N. S.	p. 367

C L A S S II. B I R D S.

D I V. I. L A N D B I R D S.

S E C T. I. R A P A C I O U S.

I. VULTURE.	Carrion.	V. <i>aura</i> .	122.	C. I. 6.
II. FALCON	Bald Eagle	F. <i>leucocephalus</i> .	C. I. 1.	
	Sea	F. <i>offisfragus</i> .	in exhibitions	
	Ringtail	F. <i>Fulvus</i> .	<i>Edw.</i> I.	
	Black-bellied	N. S.		
	White	<i>Du Pratz</i> ,	II. 75.	
	Osfrey	F. <i>Haliaëtus</i> .	C. I. 2.	Gentil

Gentil Falcon	F. gentilis <i>Mr. B.</i>
Goshawk	F. palumbarius. <i>Lawson</i>
Ashcoloured	<i>Edw.</i> 53.
Sacre	<i>Mr. B. de Buffon</i>
Winter	N. S. <i>Mus. Bl.</i>
Dusky	<i>Edw.</i> 3. 4.
Rough-footed	N. S. <i>Mr. B.</i>
Chocolate	N. S. <i>do.</i>
Marsh	<i>Edw.</i> 291.
Buzzard	F. Buteo. <i>Mr. B.</i>
White-rump'd	F. Hudsonius. <i>Edw.</i> 107.
Fork-tail	F. furcatus. C. I. 4.
Pigeon	F. columbarius. C. I. 3.
Little	F. sparverius. C. I. 5.

*

III. OWL	Great	Strix bubo. <i>Edw.</i> 60
	Short-eared	<i>Br. Zool. Mus. Bl.</i>
	Red	St. Afio C. I. 7.
	Mottled	N. S. <i>Mus. Bl.</i>

* *

Snowy	St. nyctea. <i>Edw.</i> 61
Barred	N. S. <i>Mus. Bl.</i>
Canada	<i>Br. I.</i> 518.
Brown	<i>Br. Zool. Mr. B.</i>
White	<i>ib.</i>
Hawk	<i>Edw.</i> 62.
Little.	<i>Mus. Bl. Br. Zool.</i>

IV. SHRIKE	Cinereous.	Lanius excubitor. <i>C. app.</i>
	Crested.	<i>L. Canadenfis</i>
	Louisiane.	<i>Pl. enl.</i> 397.

S E C T. II. PIES.

V. PARROT	Caroline.	Pithecatus Carolinenfis. C. I. 11.
	Illinois.	<i>Pf. pertinax. Edw.</i> 234. <i>Br.</i>
VI. CROW	Raven.	<i>Br. Zool. Mr. B.</i>
	Carriion.	<i>B. Zool. Mus. Bl.</i>
	Magpie	<i>Br. Zool. Edw.</i> p. 126.
	Cinereous	<i>C. Canadenfis</i>
	Blue.	<i>C. cristatus. C. I. 15.</i>

VII. ORIOLE	Redwing	Oriolus Phœniceus.	C. I. 13
	Baltimore	O. Baltimorus	48
	Spurious	O. Spurius	49
	Brown-headed	N. S. <i>Mr Kuckabn</i>	
VIII. GRACULE	Shining	Gracula quiscula	C. I. 12
IX. CUCKOO	Caroline	Cuculus Americanus.	C. I. 9.
X. WOODPECKER	White-billed.	Picus principalis	C. I. 16
	Buff-cheeked	P. pileatus	C. I. 17
	Gold-wing	P. auratus	18
	Scarlet	P. erythrocephalus	20
	Red-bellied	P. Carolinus	19
	Spotted	<i>Br. Zool.</i> I. 178. <i>Mus. Bl.</i>	
	Hairy	P. villosus	19
	Yellow-bellied	P. varius	21
	Little	P. pubescens	<i>ib.</i>
	Black	<i>Albin</i>	
	Three-toed	P. tridactylus.	<i>Edw.</i>
XI. NUTHATCH.	Greater	<i>Br. Zool.</i>	22
	Lesser		<i>ib.</i>
	Canada	<i>Br. III.</i> 593	
XII. KINGFISHER	Great	Alcedo alcyon	69
	Louisiane	<i>Pratz.</i> II. 82	
XIII. CREEPER	Bahama	Certhia flaveola	59
	Common	<i>Br. Zool. Mus. Bl.</i>	
XIV. HUMMER	Red-throated	Trochilus columbris	C. I. 65

S E C T. III. GALLINACEOUS.

XV. TURKY	Wild	Meleagris Gallopavo.	
XVI. GROUS	Ruffed	Tetrao umbellus	<i>Edw.</i> 248
	Pinnated	T. cupidō	C. III. 1.
	Long-tailed	T. Phasianellus	<i>Edw.</i> 117
	Spotted	T. Canadensis	<i>Edw.</i> 71, III.
	White	T. Lagopus	<i>Edw.</i> 72
	Partridge	T. Virginianus	C. III. 12
	Quail?	T. Mexicanus	
			S E C T.

S E C T. IV. COLUMBINE.

XVII. PIGEON	Passenger	<i>Columba migratoria</i>	C. I. 23
	Caroline	<i>C. Carolinensis</i>	24
	White-crowned	<i>C. leucocephala</i>	25
	Canada	<i>C. canadenfis</i>	
	Ground	<i>C. Passerina</i>	24

S E C T. V. PASSERINE.

XVIII. THRUSH	Mimic	<i>Turdus polyglottos</i>	27
	Ferruginous	<i>T. rufus</i>	28
	Fieldfare	<i>T. migratorius</i>	29
	Red-leg'd	<i>T. plumbeus</i>	30
	Black	<i>Br. II.</i>	245
	Little	<i>Edw. 296</i>	C. I. 31
	Golden-crowned	<i>Motacilla auro-capilla</i>	<i>Edw. 252</i>

XIX. STARE	Crescent	<i>Alauda magna</i>	C. I. 33
	New York	<i>N. S. Mus. Bl.</i>	

XX. CHATTERER	Prib.	<i>Ampelis garrulus</i>	C. I. 46. <i>Edw.</i>
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XXI. GROSBEAK.	Crossbill	<i>Br. Zool.</i>	<i>Edw. 303</i>
	Pine	<i>Br. Zool. IV.</i>	<i>Edw. 123, 124</i>
	Crested	<i>Loxia cardinalis</i>	C. I. 38
	Mexican	<i>L. Mexicana</i>	<i>Mus. Bl.</i>
	Roseate	<i>L. Ludoviciana</i>	
	Spotted	<i>N. S. Mus. Bl.</i>	
	Mississipi	<i>L. Dominicana</i>	
	Dominican	<i>L. Canadenfis</i>	
	Canada	<i>L. nigra</i>	C. I. 68
	Black	<i>L. caerulea</i>	39
	Blue	<i>L. violacea</i>	40
	Violet	<i>Pl. enl.</i>	38c
	Fantail	<i>Pl. enl.</i>	393
	Grey	<i>N. S. Mr. Kuckabn</i>	
	Red-headed		

XXII. BUNTING	Snow	<i>Emberiza nivalis</i>	<i>Edw. 126</i>
	Winter	<i>E. hyemalis</i>	C. I. 36
	Rice	<i>E. oryzivora</i>	C. I. 14. <i>Edw. 291</i>

Painted

	Painted Louisiiane Blue ?	E. Ciris C. 44 <i>Edw.</i> 130. 273 E. Ludoviciana. <i>Br.</i> III. 298
XXIII. TANAGRE	Blue Green Bishop Red	Tanagra cyanea C. I. 45 Motacilla guira <i>Edw.</i> 351. <i>Mus. Bl.</i> T. Episcopus. Du Pratz. II. 94 T. rubra C. I. 56
XXIV. FINCH	Towhe Golden Orange Mountain Little Cow-pen Bahama Caroline White-throated Ferruginous Crimson head Fasciated Greater red-poll.	Fringilla Erythróphthalma 34 Fr. tristis 43 Fr. zéna 42 Fr. montana <i>Edw.</i> 269 C. I. 35 34 Fr. bicolor. 37 <i>Pl. en.</i> 181. 223 ? <i>Edw.</i> 304 <i>Edw.</i> 354. <i>Br.</i> III. 296 N. S. <i>Mus. Bl.</i> N. S. <i>Do.</i> <i>Br. Zool.</i> <i>Mus. Bl.</i>
XXV. FLY-CATCHER	Tyrant Fork tail Chattering Crested Black-cap Cinereous Red-eyed Cat Canada Blue Brown	<i>Lanius tyrannus</i> C. I. 55 <i>Muscicapa tyrannus</i> C. I. 50 <i>Musc. crinita</i> C. I. 52 C. I. 53 <i>Musc. virens</i> <i>M. olivacea</i> C. I. 54 <i>M. Carolinensis</i> 66 <i>M. Canadenis</i> <i>Motacilla fialis</i> C. I. 47 C. I. 54
XXVI. LARK	Shore Red Calandre	<i>Alauda alpestris</i> C. I. 32 <i>Br. Zool.</i> <i>Edw.</i> 297 <i>Edw.</i> 268
XXVII. WAGTAIL	Redstart Yellow breast Black throat Yellow throat. Yellow rump.	<i>Muscicapa ruficilla.</i> C. I. 67 <i>Turdus trichas.</i> <i>Edw.</i> 237 <i>Motacilla Canadenis.</i> <i>Edw.</i> 252 C. I. 62. <i>Edw.</i> 255 Red

Red poll	M. petechia. <i>Edw.</i> 256
Black poll	
Pine	Certhia pinus. C. I. 61.
Crowned	M. coronata. <i>Edw.</i> 298
Golden wing	M. chrysoptera. <i>Edw.</i> 299
Green	<i>Edw.</i> 300
Pied	<i>Edw. ib.</i> M. varia
Bloody-side	M. Pensylvanica. <i>Edw.</i> 301
Cerulean	M. cœrulea. <i>Edw.</i> 302
Worm-eater.	<i>Edw.</i> 305
Yellow	<i>Br.</i> III. 492
Louisiane	500
Great	508
Quebec	M. Icterocephala
Yellow-tailed?	<i>Edw.</i> 257
Spotted	<i>Edw.</i> 257
Cinereous	<i>Br.</i> III. 524
Olive	<i>Pl. enl.</i> 58
Ruby-crowned	M. calendula. <i>Edw.</i> 254
Golden-crested.	<i>Br. Zool.</i> C. App.
Yellow	<i>Br. Zool.</i> II. 266. <i>Edw.</i>
Wren	<i>Muf. Bl.</i>

XXVIII. TITMOUSE	Crested	Parus bicolor. C. I. 57
	Hooded	C. I. 60
	Virginian	P. Virginianus. C. I. 58
	American	P. Americanus 64
	Canada	<i>Br.</i> III. 553.
	Colemouse	<i>Br. Zool.</i> Mr. B.
XXIX. SWALLOW	House	<i>Br. Zool.</i> Mr. B.
	Martin	<i>ib.</i> <i>Muf. Bl.</i>
	Sand	<i>ib.</i> C. App.
	Swift	<i>ib.</i> <i>Lawson</i>
	Purple	Hirundo purpurea. C. I. 51
	Canada	H. subis. <i>Edw.</i> 120
	Aculeated	H. pelasgia. C. III. 8
XXX. GOATSUCKER.	Common	<i>Br. Zool.</i> C. I. 8
	Lesser	Capr. minor. C. III. 16.

D I V. II. WATER FOWL.

S E C T. VI. CLOVEN-FOOTED.

*

I. H XXX ERON.	Hooping Canada Brown	Ardea Americanus. C. I. 75 A. Canadenfis. Edw. 133 A. Herodias. Edw. 136

	Common Violet Blue Cinereous Great white Little white Green Bittern Minute Caroline Green head	<i>Br. Zool. C. App.</i> A. violacea. C. I. 79 A. cœrulea 76 <i>Edw. 135</i> A. alba. <i>Mus. Bl.</i> A. æquinoctialis. C. I. 77 A. virens. 80 A. Hudsonias. <i>Edw. 135</i> <i>Br. Zool. Mus. Bl.</i> C. I. 78 <i>Mr. Kuckahn</i>
XXXII. IBIS.	Wood Scarlet White Brown	Tantalus loculator. C. I. 81 T. ruber 84 T. albus 82 T. fuscus 83
XXXIII. CURLEW	Eskimaux	N. S. <i>Mr. B.</i>
XXXIV. WOODCOCK.	American Snipe Jack Godwit Red Great Nodding Spotted	<i>Mus. Bl.</i> <i>Br. Zool. Mus. Bl.</i> <i>ib. Mus. Bl.</i> <i>ib. C. App.</i> <i>ib. Edw. 138</i> Scolopax fedoa. <i>Edw. 137</i> N. S. <i>Mr. B.</i> <i>Mus. Bl.</i>
XXXV. SAND-PIPER	Turnstone Common Spotted Cinereous	Tringa interpres <i>Edw. 141</i> <i>Br. Zool. Mr. Kuckahn</i> <i>ib. Edw. 270</i> <i>ib. Mr. B.</i>
		Knot

	Knot	<i>ib.</i> <i>Edw.</i> 276
	Redshank	<i>ib.</i> <i>C. App.</i>
	Grey Pl.	<i>ib.</i> <i>C. App.</i>
	Purre	<i>ib.</i> <i>Mus. Dl.</i>
	Little	N. S.
	Glossey	<i>Mr. B.</i> N. S.
	Green	<i>Br. Zool.</i> <i>Mr. Kuckabn</i>
XXXVI. PLOVER	Green	<i>Br. Zool.</i> <i>Mus. Bl.</i>
	Pie	<i>ib.</i> <i>C. I.</i> 85
	Noisy	<i>Charadrius vociferus.</i> <i>C. I.</i> 71
	Golden	<i>Ch. apricarius</i> <i>Edw.</i> 140
	Lark	<i>Br. Zool.</i> <i>Mus. Bl.</i>
	Sanderling	<i>ib.</i> <i>Mus. Bl.</i>
XXXVII. RAIL	Clapper	<i>Mus. Bl.</i>
	Red-breasted	<i>Edw.</i> 279
XXXVIII. WATER- HEN	Caroline	<i>Rallus Carolinus.</i> <i>Edw.</i> 144,
	Common	<i>C. I.</i> 70. <i>Br. Zool.</i> <i>Mus. Bl.</i>

S E C T. VII. With PINNATED FEET.

XXXIX. COOT	Common	<i>Br. Zool.</i> <i>Mus. Bl.</i>
XL. PHALAROPE	Grey	<i>ib.</i> <i>Edw.</i> 308
	Red.	<i>Edw.</i> 142
	Brown	<i>Edw.</i> 46
XLI. GREBE,	Eared	<i>Edw.</i> 96
	Pied bill	<i>C. I.</i> 91.

S E C T. VIII. WEBBED-FOOTED.

*	XLI. FLAMMANT	Red	<i>Phoenicopterus ruber.</i> <i>C. I.</i> 73
	XLIII. AUK	Great	<i>Br. Zool.</i> <i>Edw.</i> 147
		Razor	<i>ib.</i> <i>Edw.</i> 358
		Puffin	<i>ib.</i> <i>Edw.</i> <i>ib.</i>
		New	N. S. <i>Br. Mus.</i>
		Little	<i>Br. Zool.</i> <i>Edw.</i> 91
		Guillemot	<i>ib.</i> <i>Edw.</i> 359
		Black	<i>ib.</i>

XLIV. DIVER	Northern Immer Speckled Lumme	<i>Br. Zool. Mus. Bl.</i> <i>Colymbus Immer. Mus. Bl.</i> <i>Br. Zool. Mus. Bl.</i> <i>ib. Edw. 97. 146</i>
XLV. CUT-WATER	Black	<i>Rhynchos nigra. C. I. 90</i>
XLVI. TERN	Noddy Black Greater Lesser	<i>Sterna stolida. C. I. 88</i> <i>Br. Zool. Kalm</i> <i>ib. Mus. Bl.</i> <i>ib. Mus. Bl.</i>
XLVII. GULL	Great Wagel Herring Kittiwake Laughing Black toed Arctic	<i>ib. Mr. B.</i> <i>ib.</i> <i>ib.</i> <i>ib.</i> <i>ib.</i> <i>ib.</i> <i>ib. Edw. 148, 149.</i>
XLVIII. PETREL	Fulmar Shear water Storm	<i>ib.</i> <i>ib. Edw. 359</i> <i>ib. Edw. 91</i>
XLIX. SAW-BILL.	Goofander Redbreasted Hooded Smew	<i>Br. Zool. Mus. Bl.</i> <i>ib. Edw. 95.</i> <i>Mergus cucullatus. Edw. 360</i> <i>Br. Zool. Mus. Bl.</i>
L. DUCK	Swan Canada Wild-goose White-fronted Blue Bernacle Brant Snow Eider King Velvet Black Shoveler Golden eye Harlequin	<i>ib. Edw. 150</i> <i>Anas Canadensis. Edw. 151</i> <i>Br. Zool.</i> <i>ib. Edw. 153</i> <i>A. cærulescens. Edw. 152</i> <i>Br. Zool.</i> <i>ib.</i> <i>Anser niveus. Br. VI. Larsson</i> <i>Br. Zool. Edw. 98</i> <i>A. spectabilis. Edw. 154</i> <i>Br. Zool. Mus. Bl.</i> <i>A. perspicillata. Edw. 155</i> <i>Br. Zool. C. I. 96. fæm.</i> <i>ib. Mus. Bl.</i> <i>A. himalonica. C. I. 98. fæm.</i> <i>[Edw. 99. 157.</i> <i>Pied</i>

Pied	A. albeola.	<i>Edw.</i> 100
Pochard	<i>Br. Zool.</i>	<i>C. App.</i>
Pin-tail	<i>ib.</i>	<i>Mus. Bl.</i>
Swallow-tail	<i>ib.</i>	<i>Edw.</i> 280
Buffel	A. Bucephala.	<i>C. I.</i> 95
White-faced	A. discors.	<i>C. I.</i> 100
Ilathera	A. Bahamenfis.	<i>C. I.</i> 93
Brown	<i>Mr. B.</i>	
Summer	A. sponsa.	<i>Edw.</i> 101. <i>C. I.</i> 97 ⁴
Widgeon	<i>Br. Zool.</i>	<i>Mus. Bl.</i>
Teal	<i>ib.</i>	<i>Mr. B.</i>
Blue-wing	C. I.	99.
Mallard	<i>Br. Zool.</i>	<i>C. App.</i>
Scaup	<i>ib.</i>	<i>Mus. Bl.</i>
<hr/>		
LI. PELECAN	Pelecan	<i>Edw.</i> 93.
	Corvorant	<i>Br. Zool.</i> <i>Mus. Bl.</i>
	Shag	<i>ib.</i> <i>C. App.</i>
	Gannet	<i>Mr. B.</i> <i>Br. Zool.</i>

CLASS III. REPTILES.

SECT. I. With FOUR FEET.

I. TORTOISE	Green	Testudo Mydas	C. II.	38
	Hawksbill	T. caretta		39
	Logger-head			40
	Trunk			
	Chequered	T. Carolina.	<i>Edw.</i> 205	
	Mud			<i>Edw.</i> 287
	Rough?	T. scabra		
	Indented?	T. denticulata		
	River	N. S. <i>Dr. Garden</i>		
<hr/>				
II. FROG	Bull	Rana ocellata.	C. II.	72
	Land		C.	69
	Water		C.	70
		R	Green	

	Green	C. 71
	Horned	R. cornuta
	Striped	N. S. Mr. <i>Ellis</i>
III. LIZARD	Allegator	Lacerta Crocodylus. C. II. 63
	Lion	L. sex-lineata 68
	Guano	L. Iguana 64
	Green	65
	Blue-tail	L. fasciata 67
	Spotted	L. punctata III. 10
	Canada	N. S. Mr. <i>Ellis</i>
	Annulated	<i>Mus. Bl.</i>

S E C T. II. With Two FEET.

IV. SIREN	Caroline	Siren Lacertina. <i>Ph. Tr.</i> LVI.
		189

S E C T. III. Without FEET.

V. SNAKE	Rattle	Crotalus horridus	C. II. 41
	Lesser	Cr. miliaris	C. 4
	Chequered	Cr. Durissus	
	Hog-nose	Boa contortrix	C. 56
	Striped	Coluber leberis	
	Wampum	Coluber fasciatus	C. 58
	Green	C. ordinatus	53
	Chain	C. getulus	52
	Ribbon	C. faurita	50
	Black	C. constrictor	48
	Bead	C. guttatus	60
	Familiar	C. æstivus	57
	Porraceous	C. mysterizans	47
	Crossed	Coluber simus	
	Smooth-headed	striatulus	
	Dotted	punctatus	
	Ringed	doliatus	
	Brown	fipedon	
	Yellow	fulvius	
	Vittated	firtalis	
			Water

Water viper	C. 43
Black viper	44
Brown viper	45
Copper-bellied	46
Brown-bead	49
Speckled	51
Pensacola	N. S. <i>Mr. Ellis</i>
Coach-whip	C. 54
Corn	C. 55.
little	<i>Edw.</i> 349
	†
Glafs	Anguis ventralis C. II. 59
	† †
	† † †
Little Sloeworm	Cœcilia N. S. <i>Mr. Ellis.</i>

CLASS IV. FISH.

SECT. I. CETACEOUS.

I. NARWHAL	Narwhal
II. WHALE	Common <i>Br. Zool</i>
	Pike-headed ? <i>ib.</i>
	Fin <i>ib.</i>
	Beaked <i>ib.</i>
III. CACHALOT	Blunt-headed <i>ib.</i>
	High-finned <i>ib.</i>
IV. DOLPHIN	Porpesse <i>ib.</i>
	Grampus

SECT. II. CARTILAGINOUS.

V. LAMPREY	Common	<i>Br. Zool. C. App.</i>
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VI. RAY	Thorn-back Sting Devil-fish	C. App. C. App. C. App.
VII. SHARK	White ? Saw	C. App. Squalus Pristis. C. App.
VIII. FISHING FROG	Common	Br. Zool. C. App.
IX. STURGEON	European Blunt-nosed	ib. Mus. Bl.
X. BALISTES	Unicorn Hispid Old	B. monoceros. B. hispidus B. vetula.
XI. TETRODON	Smooth Globe Sun	T. lavigatus T. lagocephalus Br. Zool. C. App.
XII. LUMP	Lump-fish	Br. Zool.
XIII. PIPE-FISH	Shorter	ib.

S E C T. III. BONY.

		APODAL.
XIV. EEL	Muray Eel Conger	Muræna Helena. C. II. 20. 21 Br. Zool. ib.
XV. SWORD	Sword-fish	ib.
XVI. COD	Common Frost Tau	JUGULAR ib. Gadus callarias. Mus. Bl. Gadus Tau.
XVII. BLENNY	pustulated	N. S. Mr. B.
XVIII. REMORA	Remora	THORACIC. Ech. neucrates. C. II. 26
XIX. CORYPHÆNE	Parrot Blue Lineated	C. Pfittacus C. II. 18 C. lineata
		XX. BULL.

XX. BULL-HEAD	Father-lasher	<i>Br. Zool.</i>
XXI. FLOUNDER	Holibut	<i>Br. Zool.</i>
	Flounder	<i>ib.</i>
	Plaice	<i>ib.</i>
	Rough	<i>Pleuronectes plagiata</i>
	Sole	<i>Br. Zool.</i>
	Lineated	<i>Pl. lineatus</i>
	Lunated	<i>Pl. lunata</i> C. II. 27
XXII. CHÆTODON	Scaleless	<i>Ch. alepidotus</i>
	Angel	<i>Ch. triostegus</i> C. II. 31
XXIII. GILTHEAD	Lane snapper	<i>Sparus synagris</i> C. II. 17
	Pork-fish	<i>Sp. rhomboides</i> C. II. 4
	Porgy	<i>Sp. chrysops</i> C. II. 16
	Silver	<i>Sp. argyrops.</i>
	Radiated	<i>Sp. radiatus.</i> C. II. 12
	Virginian	<i>Sp. virginicus</i>
XXIV. WRASSE	Mutton	<i>Labrus anthias</i> C. II. 25
	Mangrove	<i>L. griseus</i> C. II. 9
	Hog	<i>L. flavus</i> C. II. 11
	Gaper	<i>L. hiatula</i>
	Drum	<i>L. chromis</i> C. App. XXXIII.
	Yellow	<i>L. fulvus</i> C. II. 10
	Cinereous	C. II. 11. <i>fig. 2</i>
	Bone	C. II. 13
	Great?	C. II. 15
XXV. PERCH	River?	<i>Br. Zool.</i> C. App.
	Yellow-bellied	<i>Labrus auritus.</i> C. II. 8
	Dotted	<i>Perca punctata</i>
	Whiting?	<i>P. alburnus.</i> C. II. 12
	Croker	<i>P. undulata</i> C. II. 3.
	Eyed	<i>P. ocellata</i>
	Noble	<i>P. nobilis</i>
	Philadelphian	<i>P. Philadelphica</i>
	Black	<i>P. atraria</i>
	Margate	<i>P. chrysopera</i> C. II. 2
	Negro	<i>P. punctata</i> C. II. 7
	Hind	<i>P. guttata</i> C. II. 14
	Venemous	<i>P. venenosa</i> C. II. 5
	Black-tail	<i>P. melanura</i> C. II. 7
		B 3 Rudder

	Rudder Striated Grunt Trifurcated Bafs ? Apodal	P. seftatrix C. II. 8 P. striata P. formosa C. II. 6 P. trifurca <i>Br. Zool.</i> C. App. XXXIII, C. II. 4.
XXVI. STICKLE-BACK	Crevalle Canada Skip-Jack Two-spined	Gasterosteus Carolinus G. Canadus G. Saltatrix. C. II. 14 <i>Mus. Bl.</i>
XXVII. MACKREL	Yellow-tail	Scomber Hippo,
XXVIII. GURNARD	Flying Rough	Trigla evolans N. S. <i>Mus. Bl.</i>
	* * * *	
	ABDOMINAL.	
XXIX. LOCH	Beardles	Cobitis heteroclitia
XXX. AMIA	Mud-fish	Amia calva
XXXI. SILURE	Cat Armed	Silurus felis. S. catus. C. II. ²³ S. cataphractus. C. III. 19
XXXII. TROUT	Salmon Trout White fish Long	<i>Br. Zool.</i> <i>Br. Zool.</i> Mr. B. Salmo lavarettus ? S. fœtens. C. II. 2
XXXIII. PIKE	Fox Green Sea-needle Under-jaw Barracuda Common	Esox vulpes. C. II. 1 E. Osseus. C. II. 30 <i>Br. Zool.</i> E. Brafilensis. Mr. B. C. II. 1 <i>Br. Zool.</i> C. App.
XXXIV. ELOPS	Forked	El. Saurus
XXXV. ARGENTINE	Caroline	Arg. Carolina. C. II. 24 *
		* Perhaps a herring.
		XXXVI.

XXXVI. A THERINE	Silver-fish	Ath. menidia
XXXVII. MULLET	White Common	Mugil albula. C. II. 6 <i>Br. Zool. C. App.</i>
XXXVIII. POLYNEME	Virginian	P. Virginicus
XXXIX. HERRING	Common Shad	<i>Br. Zool.</i> <i>ib. C. App.</i> XXXII
XL. CARP.	Common Roach Dace Mummy-Chog.	<i>Br. Zool. C. App.</i> <i>ib.</i> <i>ib.</i> <i>ib.</i> <i>ib.</i> N. S. <i>Muf. Bl.</i>

C L A S S V. I N S E C T S.

S E C T. I. B E E T L E S.

*

I. CHAFER	Scarabæus lunaris. <i>Muf. Bl.</i>
	aloëus
	lancifer
	nasicornis
	Carolinus
	mimas
	carnifex
	nuchicornis
	Marianus
	stercorarius
	Amazonus
	Surinamus
	nitidus
	sepicola
	horticola, a variety
	occidentalis
	lanigerus
	fasciatus
	Indus
	brunnus
	punctatus

		nobilis
		quadrimaculatus
		Hudsonias. Drury t. 35. f. 7 N.
		S. Mus. Bl.
		rufus. N. S. Mus. Bl.
		lævipes. N. S. Mus. Bl.
		piceus. N. S. Mus. Bl.
		biunguiculatus. N. S. Mus. Bl.
		pilosus. N. S. Mus. Bl.
		testaceus. N. S. Mus. Bl.
II. STAG-BEETLE	Lucanus	cervus
		capreolus
		interruptus
		— — — N. B. a brown variety
III. LEATHER-EATER	Dermeutes	lardarius
		capucinus
		typographus
		fasciatus. N. S. Mus. Bl.
IV. MIMICK-BEETLE	Hister	unicolor
V. WHIRL-BEETLE	Gyrinus	Americanus
VI. CARRION-BEETLE	Silpha	vespillo. N. B. a great variety, and the small one too
		noyeboracensis. N. S. Mus. Bl.
		bipustulata
		quadripustulata
		Americana
		obscura
		aquatica
VII. WEEVIL	Curculio	noveboracensis. N. S. Mus. Bl.
		palmarum
		Bacchus
		dispar
		anchoraco
		nucum
		incanus
		scutellatus. N. S. Mus. Bl.
VIII. NUT-BEETLE	Attelabus	curculionoides
		Pensylvanicus.
		IX. LADY-

IX. LADY-FLY	Coccinella	impunctata 7-punctata 13-punctata 2-pustulata
		* * *
X. GLOW-WORM	Lampyris	Pyralis marginata pilosa. N. S. <i>Muf. Bl.</i>
XI. SEED-BEETLE	Bruchus Pisi	<i>Kalm I.</i> 173—177
XII. GOLDEN-HONEY-BEETLE	Chrysomela	5-punctata occidentalis Boleti Philadelphica 3-maculata Americana lineola bicolor, variety with red thighs, <i>Muf. Bl.</i> scopolina obscura 10-maculata 12-punctata Phellandrii tomentosa Rhoi. N. S. <i>Muf. Bl.</i> spinicornis. N. S. <i>Muf. Bl.</i> lepturoides. N. S. <i>Muf. Bl.</i> lineato-punctata. N. S. <i>Muf. Bl.</i> trifurcata. N. S. <i>Muf. Bl.</i> laticlavia. N. S. <i>Muf. Bl.</i> fimbriata. N. S. <i>Muf. Bl.</i> frontalis. N. S. <i>Muf. Bl.</i> Hudsonias. N. S. <i>Muf. Bl.</i>
XIII. BLISTER-BEETLE	Meloe	vesicatorius majalis cinerea. N. S. <i>Muf. Bl.</i>
XIV. STINKING-BEETLE	Tenebrio	chalybeus Mauritanicus <i>culinaris</i>

XV. TORTOISE-BEETLE	<i>Cassida</i>	<i>culinaris</i> <i>fosfor</i>
		* * *
XVI. GLOSSY-BEETLE	<i>Cicindela</i>	<i>viridis</i> <i>bipustula</i> ? <i>Muf. Bl.</i>
XVII. GROUND-BEETLE	<i>Carabus</i>	<i>hybrida</i> <i>Germanica</i> <i>riparia</i>
		<i>granulatus</i> , γ . <i>hortensis</i> <i>leucophthalmus</i> <i>inquisitor</i> <i>lividus</i> , small variety <i>marginatus</i> <i>crepitans</i> <i>Americanus</i> <i>cyancephalus</i> <i>vulgaris</i> <i>piceus</i> <i>fericeus</i> . N. S. <i>Muf. Bl.</i> <i>fauciatus</i> . N. S. <i>Muf. Bl.</i>
XVIII. BURN-COW	<i>Buprestis</i>	<i>gigantea</i> <i>mariana</i> <i>chrysoptigma</i> <i>Austriaca</i>
XIX. SPRING-BEETLE	<i>Elater</i>	<i>oculatus</i> <i>phosporeus</i> <i>ligneus</i> ? <i>obscurus</i>
XX. WATER-BEETLE	<i>Dytiscus</i>	<i>fusipes</i> <i>marginatus</i>
XXI. SOFTWINGED-BEETLE	<i>Malacopteryx</i> <i>Cantharis</i>	<i>Americauus</i> . N. S. <i>Muf. Bl.</i> <i>tropica</i>
XXII. WOOD-BEETLE	<i>Leptura</i>	<i>mystica</i> <i>detrita</i>

XXIII. CAPRICORN-
BEETLE. *Cerambyx*

	Robiniæ. <i>Drury.</i> t. 41. f. 2.
	<i>N. S. Mus. Bl.</i>
	Americana. <i>N. S. Mus. Bl.</i>
	nitens
	imbricornis
	coriarius, variety
	melanopus
	lineatus
	spinibarbis
	araneiformis
	4-maculatus
	fuccinctus
	suaveolens
	Coquus
	hispicornis. <i>Drury.</i> t. 41. f. 4.
	rusticus
	bajulus
	tetraphthalmus. <i>N. S. Mus. Bl.</i>
	brunnus. <i>N. S. Mus. Bl.</i>
	palliatus. <i>N. S. Mus. Bl.</i>
	clavipes. <i>N. S. Mus. Bl.</i>

XXIV. ROVE-BEETLE *Staphylinus*

	hirtus
	erythropterus

XXV. CLIP-T-WINGED
BEETLE *Necydalis*

	collaris. <i>N. S. Mus. Bl.</i>
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XXVI. EARWIG *Forficula*

	auricularia
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S E C T. II. H A L F W I N G E D I N S E C T S.

XXVII. COCKROACH

Blatta

Americana

Orientalis

Germanica

livida. *N. S. Mus. Bl.*

XXVIII. CAMELCRICKET

Mantis

irrorata

Carolina

XXIX. LOCUST

Gryllus

brevicornis

gryllotalpa

campestris

citrifolius

citrifolius
laurifolius
myrtifolius?
succinctus
cristatus
Carolinus

XXX. FLEA-LOCUST	Cicada	squamigera tibicen septendecim violacea spumaria phalænoides Lanio carinata. N. S. <i>Muf. Bl.</i> guttata. N. S. <i>Muf. Bl.</i> coccinea. N. S. <i>Muf. Bl.</i>
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XXXI. BOAT-FLY	Notonecta	glauca lineata. N. S. <i>Muf. Bl.</i>
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XXXII. WATERSCORPION	Nepa	grandis
XXXIII. BUG	Cimex	lecticularis. <i>Kalm.</i> bidens ictericus floridanus hæmorrhous baccarum prasinus biguttatus, variety with red dots and marges cristatus trifasciatus succinctus lacustris
XXXIV. PLANTSUCKER	Chermes	Alni. <i>Kalm</i>
XXXV. COCHINEAL	Coccus	Caeti. <i>Bartram's Florida</i>

S E C T. III. PAPILIONACEOUS. INSECTS.

XXXVI. BUTTERFLY	Papilio	Troilus. <i>Drury.</i> t. 11. f. 1—5?
		Ajax. <i>Edw.</i> 34.
		Xuthus. <i>Drury.</i> t. 22. f. 1. 2.
		Antilochus
		Pedalirius
		Protephilus. <i>Drury.</i> t. 22. f. 34.
		Apollo. <i>Muſ. Bl.</i>
		Brassicæ
		Hyale
		Eubule
		Ecclipsis
		Midamus
		Plexippus
		Misippus
		Chrysippus
		Canthus
		Almana
		Orithya
		Cardui
		Antiope. <i>Kalm.</i>
		urticæ
		C. album.
		Atalanta
		Euphrosyne. <i>Kalm.</i>
		Cupido
		quercus
		Echion
		Virgaureæ
		Bixa

XXXVII. HAWK-MOTH	Sphinx	ocellata
		Populi
		Carolina
		Celerio
		Pinastris
		fuciformis. <i>g. Tityus</i>

XXXVIII. MOTH	Phalæna	Atlas
		Cecropia
		Paphia

Luna

Luna
Virgo
Plantaginis
Chrysorrhœa
lubricipeda
paranympha
Gamma
Pfi
bilineata
viridana
bella
pulchella

S E C T. IV. INSECTS with nervous Wings.

XXXIX. DRAGON- FLY Libellula flaveola
FLY depressa
ænea
umbrata
Americana
Carolina

XL. CAMEL-FLY Raphidia cornuta

XLI. SPRING-FLY Phryganea bicaudata

XLII. PEARL-FLY Hemerobius pectinicornis

XLIII. SCORPION- FLY Panorpa communis

S E C T. V. INSECTS with Stings.

XLIV. BEE Apis cordata
mellifica
rostrata
violacea
Carolina
pratorum
æstuans
noveboracensis N. S. *Mus. Bl.*
vespiformis. N. S. *Mus. Bl.*
fericea. N. S. *Mus. Bl.*

XLV. ANT	Formica	herculeana rufa
XLVI. WASP	Vespa	Carolina maculata. <i>Mus. Bl.</i> annularis quadridens Canadenfis
XLVII. GOLDEN WALL-FLY		Chrysis cyanea
XLVIII. TAILED WASP	Sirex	Columba. <i>Mus. Bl.</i>
XLIX. SAW-FLY	Tenthredo	scrophulariae lutea viridis
L. ICHNEUMON WASP	Sphex	fabulosa cœrulea Pennsylvanica arenaria
LI. ICHNEUMON- FLY	Ichneumon	luteus
LII. NAKED BEE	Mutilla	occidentalis

S E C T. VI. Two-winged INSECTS.

LIII. GNAT	Culex	pipiens. <i>Musquito</i> pulicaris
LIV. WASP-FLY	Afilus	æstuans gibbosus
LV. FLOWER- BREEZE	Bombylius	minor. <i>Mus. Bl.</i>
LVI. HORSE-FLY	Hippobosca	hirundinis. <i>Mus. Bl.</i>

LVII.

LVII. FLY	Musca	illucens. Drury, t. 44. f. 1. <i>M. Bl.</i> leucopa vomitoria carnaria domestica
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LVIII. WHAME	Tabanus	Americanus. N. S. <i>Mus. Bl.</i>
LIX. GADFLY	Oestrus	Tarandi

S E C T. VII. INSECTS without Wings

LX. SUGARMITE	Lepisma	laccharina
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LXI. GROUND- FLEA	Podura	aquatica
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LXII. DEATH- WATCH	Termes	pulsatorium
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LXIII. LOUSE	Pediculus	humanus ricinoides suis cervi meleagridis
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LXIV. FLEA	Pulex	irritans penetrans. <i>Chigger</i>
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LXV. TICK	Acarus	Americanus Siro holosericeus
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LXVI. LONG- LEGGED SPIDER	Phalangium	grossipes opilio acaroides balænarum reniforme
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LXVII. SPIDER	Aranea	diadema clavipes venatoria
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LXVIII. SCOR- PION	Scorpio	Americanus australis. <i>Mys. Bl.</i>
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LXIX.

LXIX. CRABFISH.	fentry minute land florid Sand common roughshelled spider dotted rock redclawed	Cancer pinnophylax C. minutus. <i>Kalm.</i> C. ruricola. <i>Cat. II.</i> 32. C. floridus C. vocans. <i>Cat. II.</i> 35. C. mænas. <i>Mr. B.</i> C. granulatus. <i>Cat. II.</i> 36. N° 2. C. araneus. <i>Mr. B.</i> C. punctatus C. Grapsus. <i>Cat. II.</i> 36. N° 1. <i>Cat. II.</i> 37. f 1.
LXX. LOESTER	common cynic Soldier Cray	Cancer Gammarus C. Diogenes. <i>Cat. II.</i> 33. f. 1. 2. <i>Cat. II.</i> 34. C. carcinus
LXXI. MONOCULE	King's Crab	Monoculus Polypheus. <i>Muf. Bl.</i>
LXXII. MILLEPEE	Oniscus	Oestrum. <i>Muf. Bl.</i> Physodes. <i>Muf. Bl.</i> Ceti Astellus
LXXIII. CENTIPEE	Scolopendra	forficata morsitans. <i>Cat. II.</i> 2. occidentalis marina
LXXIV. GALLYWORM	Julus	crassus

T E S T A C E O U S.

REFERENCES to American Shells, engraved in Lister's
Hist. Conch.

LAND	N° 19	Sea Bivalves. N°
	45	34. 279
	69	196. 358
	82	200. 434
	91	277. 436
	92	Sea turbinated. 855. a. 12
	93	1058.—10
	94	1059—2
		4
RIVER	3	River Bivalve
TURBINATED	4	5
	5	6
	6	9
	7	10
	8	15
	35	
	44	
	45	
	46	

S H O R T

S H O R T D I R E C T I O N S

For LOVERS and PROMOTERS of
N A T U R A L H I S T O R Y,

In what manner Specimens of all Kinds may be collected, preserved, and transported to distant Countries.

I. **A**LL Quadrupeds of a great bulk must be skinned as soon as possible after death; the tail, claws, teeth, horns, ears, bristles on the nose and chin, are carefully to be preserved; the hair of the fur as little stained with blood as possible; the opening is to be as small as it can conveniently be without hindering the operation; the inside of the skin may then be washed or brushed over with a liquor, made of an ounce of Sal Ammoniac, dissolved in a quart of water, in which afterwards two ounces of corrosive sublimate Mercury must be put: or four ounces of Arsenic may be boiled in two quarts, or two quarts and a half of water, till all or the greater part of it be dissolved, and the liquor may serve for the same purpose to wash the inside of the skin: then the whole cavity must be stuffed with oakum or tow, likewise saturated with the above liquor, afterwards dried and mixed

with a powder of four parts of Tobacco-sand, four parts of pounded black Pepper, one part of burnt Alum, and one part of corrosive Sublimate or Arsenic: lastly, the whole is to be sewed with a thread dipt in the above liquor, and the skin thus stuffed must be gently dried, and a day after put into an oven, whose heat must be so gentle, that a hair, or a feather put for trial's sake into it, will not crisp, or curl, or bend; and thus it will be perfectly dried: the eyes may be filled up with putty, which, when dry, will look like the white part of an eye, and will bear painting, to express with oil-colours the iris and pupil of the natural eye of the animal in question. The whole animal must be put into a box, filled with tow or moss, or oakum steeped in the above liquor, and perfectly dried. The box must be brush'd over on both sides with the above liquor, and dried; and the crevices shut up with pieces of paper pasted over; the paste must be made either with the arsenical liquor, or that made with corrosive sublimate instead of common water; and I can assure these precautions, though cheap and simple, will keep the animal in the best preservation on the longest voyages, and for many years in a collection. This way of preparing and securing the boxes for sending specimens abroad, the prepared oakum or tow, the powder and liquor mentioned above, are always to be understood when I afterwards speak of prepared boxes, prepared tow, moss, or oakum, and preparing powder or liquor.

II. Small Quadrupeds may be plunged into a keg of brandy, rack or rum, and thus sent over: observe however to put them first into the coarser kind of spirits; and after they have been therein for a while, and parted with some impurities, you must put them into another vessel with new clean rum or brandy, into which some alum may be put; and they will keep thus better, and be less subject to change or decay.

III. Birds must be opened at the vent, their entrails, lungs,

lungs, and crows taken out, washed with the above preparing liquor, strewed with the preparing powder, stuffed with the prepared oakum or tow ; their plumage kept clean during the operation, sewed up with thread steeped in the preparing liquor ; the eyes taken out, with the tongue, and both places washed with the same liquor ; the mouth must be filled with prepared tow in great birds ; the eyes filled up with putty, and, when dry, painted with oil-colour after the natural colour of live birds of the same species, and then dried in an oven : however, as there is all the meat on the bird left, care must be taken not to take too plump or too fat birds, and dry them slowly under the same precaution as mentioned N° I. The operation must be repeated till the bird be perfectly dry. The attitude may be given to the bird before he be put into the oven, by wires that are sharp on one end, and thrust through the bird's legs, body, breast, and neck, and others going through the wings and body. Small birds are likewise well preserved in brandy, rack, or rum ; and when arrived at the place of their destination, they must be washed and sweetened in fresh water for several times, and lastly dipped in the preparing liquor, the plumage laid in order, the attitude given to the bird by wires, and then dried. Care must be taken to kill the birds with shot proportioned to their size, and at a reasonable distance, that the specimen may not be mangled and torn. Young birds which have not yet moulted, must not be taken, but old birds in full feather, and, if possible, a specimen of each sex ; for the sexes often vary very much in size, feather, and colour. The nests of birds and their eggs would likewise contribute towards perfecting the history of this branch of zoology.

IV. All kinds of Reptiles, as snakes, lizards, and frogs, and small tortoises, must be put into brandy or rum with alum in it : observe not to take such snakes or lizards as have accidentally lost their tails : the scales of these animals must be carefully preserved.

V. Fish

V. Fish of all denominations will likewise bear sending in bottles or kegs with brandy or rum. The fins, and tails of the fish, their scales, and in some kinds, the beards, or other small characteristic appendages, must not be rubbed, torn, or destroyed.

VI. Insects may be caught in a pair of forceps covered with fine green or white gauze, which for better security may be sewed over either with silk or thread. The collector must have a pincushion, with three or four different sizes of pins, calculated for the different sizes of the insects; one or two chip-boxes lined on top and bottom with cork, all steeped in the preparing liquor; one or more larger store-boxes at home to put therein the insects caught in the various excursions; a large Muscheto gauze-net made in the shape of a bat fowling-net, which is to be got ready made in London; and a thread net with small meshes on a round wire hoop fixed to a long pole, in order thus to catch insects that live in water. With these instruments all insects may easily be caught. The beetles must have the pin run through one of their wing-shells; the half-winged insects through the thorax, and so likewise must be done to butterflies, hawk-moths, and moths, to the insects with four and two membranaceous wings, and some of the insects without wings. As the papilionaceous insects very frequently beat their wings, and thus rub off the fine scales covering them, it is necessary to give these creatures, when in the forceps or net, a gentle squeeze at the insertion of the wings in the body, and to put them, when returned home from an excursion, on a large pincushion, by which means they will be enabled to rest their feet on, and this will prevent their fluttering. Beetles, and many of the half-winged insects, may be dipped in the preparing liquor, which will kill and put them soon out of pain and prevent small insects from destroying them. The greater part of beetles may with as great propriety be plunged into a bottle,

bottle, with rum or rack, and thus sent over. This can likewise be done with all marine insects, small crabs, millepees, centipees, spiders, gally worms, scorpions, &c. and many curious grubs or caterpillars, which are the first state which beetles and butterflies, moths, &c. live in. To each insect, not in spirits, put a small paper, on which is marked the time of the year it is caught in, the plant or food it lives upon, its changes, and what animals feast again upon the insect, and other such particularities.

VII. The shells, both those found in fresh water-lakes, ponds, and rivers, and those that live only in the ocean, must not be chosen among those that lie on the shores of the sea and fresh waters, and have been broken and injured, or rolled by the waves and exposed to the air and sun and thus calcined; but rather as fresh as possible, and with the animal in it: one or two specimens of which may be preserved in Spirits: from the rest extract the animal, and keep the shell, when perfectly dry and sweet, packed up in cotton, tow, or moss. The same is to be done with the echini or sea-eggs, and other crustaceous animals; especially be careful to preserve their curious spines.

VIII. The harder and stone-like animal productions of the sea, comprehended under the names of Madrepores, Millepores, Cellepores, Corals, and Gorgonias, are either without its inhabitants, and then they want no other care but a good packing in cotton or tow; or the animal is still alive, and then it would be necessary to put the specimen in a flat vessel filled with Sea-water, and to watch the moment when the animal puts out its arms or branches, and then to pour instantly a good quantity of strong spirit into the water, so that the acid of the liquor may prevent the animal from drawing in its branches or arms: after this, the animal may be

put

put into another glass, with new rum poured on it; the glass must be well corked, and covered with putty and a bladder. All the alcyoniums, sponges, hornwracks, pipe-corals, coralines, sea-feathers, and other curious zoophytes, must be treated in the same manner; as this would be a means to acquaint us with the various inhabitants of this curious tribe of marine productions.

IX. The various worm-like animals comprehended under the name of *Mollusca*, may be best preserved in rum or brandy; only observe to pour the rum on them, when they are putting out their arms, eyes, horns, tentacula, and other parts of their frame.

X. To the quadrupeds, birds, reptiles, fish, and in general to all the specimens, must be fixed lead tickets by means of a wire, and a number on the lead scratched in; which must be referred to, in a paper, where under the same number the collector would be pleased to write the name by which the animal goes in his country, or among the various tribes of Indian nations, with the food, age, growth, nature, manners, haunts, how many young or eggs it brings forth, in what manner it is caught, what it is used for, &c. &c.

XI. The vegetable world affords such an immense variety of productions of so great and varied uses for the various purposes and wants of human society; that it would be rather blameable in men to be indolent in respect to them. Old England can justly glory in being possessed of the greatest variety of plants of all kinds; but even these glorious and spirited efforts in this branch of knowledge, are not yet sufficient to make us acquainted with all the productions of the vegetable kingdom, and their various uses. Besides this, their cultivation at large is often impossible in our cold climate, and reserved for a more mild and happy one, beyond

beyord the Atlantic: nothing is therefore more necessary than to facilitate the transportation of seeds and plants into distant countries in a state of vegetation. The ingenious and great promoter of natural history, John Ellis, Esq; has favoured the world with a curious pamphlet, containing the best directions for that purpose; it would be therefore superfluous to repeat what he has already said, were it not necessary to make my performance more compleat, by inserting a few hints abstracted from his useful publication; and adding to it some remarks of my own.

Seeds of all kinds, intended to be sent abroad, must be collected perfectly ripe in dry weather, and kept dry without exposing them to sunshine. Hard nuts, and leguminous seeds, may be plunged for a moment in the preparing liquor and then dried again, as this would prevent insects from attacking them. In general must the seeds be previously examined, and care taken that no insects may be sent with them; this can sometimes be discovered by the naked eye, sometimes by a magnifying glass, and by a little brown or black spot on the outside of the seed; such ripe and chosen seeds, if of a good size, each of them may be wrapped in a flat piece of bees-wax; if small or quite minute, many may be put together in such a piece of bees-wax, or, what is still better, in a piece of cerate paper, i. e. paper steeped in melted bees-wax, and all these parcels must be put in a pot or box, proportionate to the quantity of seeds you have, filled with melted wax, to the height of about the size of the seeds you are to send, or the parcels you have made; and when the wax is pretty cool, but still soft, lay your seeds or parcels in rows in the soft wax, and then fill again some melted wax in, and proceed to lay seeds in the same manner till your pot or box be full. Pulpy seeds, as those of strawberries, mulberries, arbutus's,

may be squeezed together, pressing out the watery particles, drying these small cakes, and then putting them in the abovementioned cerate paper. Or small seeds mixed with dry sand, and put in cerate paper, packed in proportionate glasses, and covered with a bladder or leather, and all such glasses again packed in a vessel, filled with a mixture, consisting of half culinary salt, the other half of two parts of saltpetre, and one part of sal ammoniac, will keep the seeds cool, and preserve their vegetative power.

Plants or shrubs that are to be transported, must be taken out with a lump of soil covering the roots, which must be wrapped in wet moss, surrounded with paper or a Russian bast-mat and packthread ; plants thus packed may be put in a chest or box upon a layer of three inches deep wet moss in close rows, filling up all vacancies with moss. Some holes or slips in the lid of the box, covered with bast-mats or sail-cloth, will give them air, and a direction must be fixed on top, to keep the lid uppermost, and the box in an open but shady airy place, out of the spray of the sea : the same caution, in regard to air and sea, must be taken with the boxes containing seeds.

XII. Minerals, fossils, and petrefactions of all kinds, ought to be wrapt separately in papers, and the whole collection packed in hay, tow, hemp, or cotton, in a box, so that none of the specimens may touch or rub one another when the box is transported by land-carriage, or shaken by the rolling of the sea. Clays, earths, sands, and salts, are best preserved in glasses, or little glazed gally-pots covered with a bladder. Mineral waters may be safely filled in glass bottles, immediately after corked up and pitched, or covered with putty round the cork.

XIII. Though antiquities are no ways in connection with Natural History, it will however, be very acceptable, if the curious of North America will collect and communicate to their friends in Great Britain, all the inscriptions, arms, vases, utensils, idols, and other things, found in that continent, capable of throwing a light on the history and antiquities of its first inhabitants.

In the Catalogue of North American animals are some omitted, and some discovered since the publication of that pamphlet, and I therefore found it most convenient to put them here by way of supplement.

Page 6. Sect. II. before II. Sheep put	Penn. Syn.
Ox. American.	<i>Eur.</i> Quad. No. 6.
8. Genus II. Falcon before Bald Eagle, Golden Eagle. <i>F. chrysaëtos.</i>	<i>Boissi</i> I. p. 288.
10. Genus XIII. Creeper, add after common, Pine Certhia pinus.	C. I. 61.
Ibid. Before Genus XV. Turkey	
BUSTARD, common, <i>otis tarda</i>	<i>Boissi</i> I. p. 94.
18. Among the Snakes, Eggeater. <i>Coluber ovivorus</i>	
22. Before Genus XXXII. Trout, Insert	
LEATHERFISH Tang <i>Teuthis hepatus.</i>	C. II. 10.
Ibid. Before Genus XXXIII. PIKE. Add	
WHIPTAIL forked <i>Fistularia tabaccaria</i>	C. II. 17.
23. Before Genus XXXVIII. Polyneme,	
FLYING FISH. Common <i>Exocoetus</i>	
volitans,	<i>Kalm.</i>
Round evolans.	C. II. 8,
Ibid. At the bottom of the page	
Scarabæus <i>Lanius</i>	<i>Drury</i> t. 33. f. 8.
	Page

Page 27. Among the Cerambyces.

Cerambyx irroratus *Drury* t. 41. f. 3.

Ibid. Genus XXVIII. CAMEL-

CRICKET Mantis, add,

Mantis Gongylodes. *Drury* t. 50. f. 2.

28. Before Genus XXX.

Gryllus tataricus *Drury* t. 49. f. 2.

30. Under Genus XXXIX. Dra-
gon-fly.

Libellula Virgo γ *Drury* t. 48. f. 2.

Ibid. After Genus XLIII. put

ANT-LION, Myrmeleon Formicalyn. *Drury* t. 46. f. 4.

